

No.

8900120



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Agripro Biosciences Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Rio Blanco'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 31st day of December in the year of our Lord one thousand nine hundred and ninety-two.

Attest

Kenneth Hoars
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Lurand M. Ligon
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Agripro Biosciences Inc.		2. TEMPORARY DESIGNATION W81-162		3. VARIETY NAME RIO BLANCO	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 6700 Antioch Shawnee Mission, Kansas 66204		5. PHONE (Include area code) 913-384-4940 (KS) 303-532-3721 (CO)		FOR OFFICIAL USE ONLY PVPO NUMBER 8900120	
6. GENUS AND SPECIES NAME Triticum aestivum		7. FAMILY NAME (Botanical) Gramineae		FILING DATE Mar. 20, 1989 TIME <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
8. KIND NAME Hard White Wheat		9. DATE OF DETERMINATION 1) 1981 June 1984 2) 1985 per letter of 25 Nov 1992		FEES RECEIVED AMOUNT FOR FILING \$ 1800.00 DATE Mar. 20, 1989 AMOUNT FOR CERTIFICATE \$ 200.00 DATE Dec. 7, 1992	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation				12. DATE OF INCORPORATION February 8, 1989	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware					
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS R.E. Heiner 6700 Antioch Shawnee Mission, KS 66204 913-384-4940 OR R. Bruns or C. Bruns P.O. Box 30 Berthoud, CO 80513 PHONE (Include area code) 303-532-3721					
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.) b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement. c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.) d. <input checked="" type="checkbox"/> Exhibit D, Additional Description of Variety. e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership. Exhibit F. Quality & Agronomics					
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) <input checked="" type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input type="checkbox"/> No					
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input checked="" type="checkbox"/> Foundation <input checked="" type="checkbox"/> Registered <input checked="" type="checkbox"/> Certified		
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No					
19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input checked="" type="checkbox"/> No					
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF APPLICANT R.E. Heiner				DATE 3-14-89	
SIGNATURE OF APPLICANT				DATE	

EXHIBIT A.**ORIGIN AND BREEDING HISTORY OF RIO BLANCO**

Rio Blanco is an F3 derived single plant selection made in 1979 from the cross OK11252A/W76-1226. The resulting plant row was observed in 1980 and advanced into preliminary yield trials as W81-162 in 1981. Rio Blanco is similar to its sister line Mesa but differs principally in that it is recessive for all three alleles for red seed color and is thus a hard white wheat.

Rio Blanco has been tested as experimental number W81-162 in AgriPro preliminary and replicated yield trials at numerous locations in the hard red winter wheat region of the Great Plains from 1981 thru 1987. Furthermore, Rio Blanco was tested in the Kansas State University Intra State Nursery (KIN) Trial in 1987 and was included in the 1988 Kansas State University Variety Performance Trial (VPT) at all 16 locations in Kansas courtesy of the Kansas Crop Improvement Association (KCIA). Rio Blanco was entered for first year testing in the 1988 Southern Regional Performance Nursery (SRPN) with the UDSA/ARS.

In 1984, 100 head-rows were grown in Berthoud, Colorado and 97 were selected to produce breeders seed. Approximately 1,440 pounds of breeder seed was produced in 1985. In 1987, approximately 21,550 pounds of Foundation seed was produced.

Rio Blanco is uniform and stable. Less than .5% of the plants were rogued from the breeder seed field in 1985. Approximately 95% of the rogued variant plants were three to ten centimeters taller than Rio Blanco. Up to 1% total variant plants may be encountered in subsequent generations.

Given the nature of the three gene recessive white kernal trait a 2% of the red kernel variants may be encountered in subsequent generations. These red kernel variants are not to exceed 2% in subsequent generations.

EXHIBIT B.

NOVELTY STATEMENT

Rio Blanco is most similar to the hard red winter wheats Mesa and Trailblazer. However, it can be easily distinguished by the following morphological characteristics:

- Rio Blanco is a hard white wheat. Mesa and Trailblazer are hard red winter wheats.
- Rio Blanco has a midlong to long glume length. Trailblazer has a long glume length, (see statistical data page 1).

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page 1.

ANOVA TABLE FOR GLUME LENGTH

RIO BLANCO VS. TRAILBLAZER

<u>SOURCE</u>	<u>DF</u>	<u>SS</u>	<u>MS</u>
TOTAL	49	12.866	
VAR	1	6.193	6.19276
ERROR	48	6.673	0.13902

F-TEST= **44.545

CV= 0.476

LSD(5%)= 0.042

MEANS FOR EACH VARIETY

Rio Blanco= 8.5mm

Trailblazer= 9.2mm

**The difference in means of glume length are significantly different at the 1% probability level.

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY

WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

Agripro Biosciences Inc.

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

6700 Antioch
Shawnee Mission, Kansas 66204

FOR OFFICIAL USE ONLY

PVPO NUMBER

8900120

VARIETY NAME OR TEMPORARY DESIGNATION

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (e.g., or) when number is either 99 or less or 9 or less.

1. KIND:

1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

1 = SPRING 2 = WINTER 3 = OTHER (Specify) 1 = SOFT 3 = OTHER (Specify)
2 = HARD

1 = WHITE 2 = RED 3 = OTHER (Specify)

3. SEASON - NUMBER OF DAYS FROM planting to:

FIRST FLOWERING

LAST FLOWERING

4. MATURITY (50% Flowering):

NO. OF DAYS EARLIER THAN 1 = ARTHUR 2 = SCOUT 3 = CHRIS

NO. OF DAYS LATER THAN 4 = LEMHI 5 = NUGAINES 6 = LEEDS 7 = Mesa

5. PLANT HEIGHT (From soil level to top of head):

CM. HIGH

CM. TALLER THAN

CM. SHORTER THAN 1 = ARTHUR 2 = SCOUT 3 = CHRIS
4 = LEMHI 5 = NUGAINES 6 = LEEDS 7 = Mesa

6. PLANT COLOR AT BOOTING (See reverse):

1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHUR COLOR:

1 = YELLOW 2 = PURPLE

8. STEM:

Anthocyanin: 1 = ABSENT 2 = PRESENT

Waxy bloom: 1 = ABSENT 2 = PRESENT

Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT

Internodes: 1 = HOLLOW 2 = SOLID

NO. OF NODES (Originating from node above ground)

CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

Anthocyanin: 1 = ABSENT 2 = PRESENT

Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

Flag leaf at booting stage: 1 = ERECT 2 = RECURVED
3 = OTHER (Specify)

Flag leaf: 1 = NOT TWISTED 2 = TWISTED

Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT

Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT

MM. LEAF WIDTH (First leaf below flag leaf)

CM. LEAF LENGTH (First leaf below flag leaf)

'Rio Blanco'

8900120

FORM GR-470-6 (REVERSE)

11. HEAD:

<input type="checkbox"/> 3	Density: 1 = LAX 2 = DENSE 3 = Middense	<input type="checkbox"/> 1	Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) _____		
<input type="checkbox"/> 4	Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED				
<input type="checkbox"/> 1	Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____				
<input type="checkbox"/> 8.	<input type="checkbox"/> 7	CM. LENGTH	<input type="checkbox"/> 9.	<input type="checkbox"/> 0	MM. WIDTH

12. GLUMES AT MATURITY:

<input type="checkbox"/> 2	Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.) average 8.4mm	<input type="checkbox"/> 1	Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.) 3 = WIDE (CA. 4 mm.)
<input type="checkbox"/> 2	Shoulder: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED shape: 4 = SQUARE 5 = ELEVATED 6 = APICULATE	<input type="checkbox"/> 3	Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

<input type="checkbox"/> 1	1 = WHITE 2 = RED 3 = PURPLE
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14. SEEDLING ANTHOCYANIN:

<input type="checkbox"/> 2	1 = ABSENT 2 = PRESENT
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15. JUVENILE PLANT GROWTH HABIT:

<input type="checkbox"/> 2	1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT
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16. SEED:

<input type="checkbox"/> 1-3	Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL ovate to elliptical	<input type="checkbox"/> 1	Check: 1 = ROUNDED 2 = ANGULAR		
<input type="checkbox"/> 2	Brush: 1 = SHORT 2 = MEDIUM 3 = LONG midlong	<input type="checkbox"/> 1	Brush: 1 = NOT COLLARED 2 = COLLARED		
<input type="checkbox"/> --	Phenol reaction: 1 = IVORY 2 = FAWN 3 = LT. BROWN (See instructions): 4 = BROWN 5 = BLACK				
<input type="checkbox"/> 1	Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____				
<input type="checkbox"/> 6.	<input type="checkbox"/> 3	MM. LENGTH	<input type="checkbox"/> 2.	<input type="checkbox"/> 7	MM. WIDTH
<input type="checkbox"/> 3	<input type="checkbox"/> 0	GM. PER 1000 SEEDS			

17. SEED CREASE:

<input type="checkbox"/> 1	Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'	<input type="checkbox"/> 1	Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'
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18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3 = Moderately Susceptible 4 = Moderately Resistant

<input type="checkbox"/> 4	STEM RUST 1988 (Races) field races	<input type="checkbox"/> 4	LEAF RUST 1988 (Races) field races	<input type="checkbox"/> 0	STRIPE RUST (Races)	<input type="checkbox"/> 0	LOOSE SMUT
<input type="checkbox"/> 1	POWDERY MILDEW	<input type="checkbox"/> 0	BUNT	<input type="checkbox"/> 2	OTHER (Specify) soil borne mosaic virus		

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3 = Moderately Susceptible 4 = Moderately Resistant

<input type="checkbox"/> 0	SAWFLY	<input type="checkbox"/> 0	APHID (Bydv.)	<input type="checkbox"/> 0	GREEN BUG	<input type="checkbox"/> 0	CEREAL LEAF BEETLE
<input type="checkbox"/> 0	OTHER (Specify) _____		HESSIAN FLY	<input type="checkbox"/> 3	GP	<input type="checkbox"/> 0	A
			RACES:	<input type="checkbox"/> 0	D	<input type="checkbox"/> 0	E
				<input type="checkbox"/> 0	F	<input type="checkbox"/> 0	G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Trailblazer	Seed size	Mesa
Leaf size	Mesa	Seed shape	Mesa
Leaf color	Trailblazer	Coleoptile elongation	Trailblazer
Leaf carriage	Trailblazer	Seedling pigmentation	Trailblazer

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(a) L.W. Briggie and L. P. Reitz. 1963. *Classification of Tritium Species and Their Varieties Grown in the United States*. Technical Bulletin 1278, United States Department of Agriculture.(b) W.E. Walls. 1965. *A Standardized Phenol Method for Testing Wheat Seeds for Vernal Purity*. contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

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EXHIBIT D.

ADDITIONAL BOTANICAL DESCRIPTION OF RIO BLANCO

Rio Blanco is a hard white wheat bred and developed by Agripro Biosciences Inc. Rio Blanco is a high yielding, medium maturity, short to intermediate semidwarf wheat with good milling and baking properties. It was tested as the experimental number W81-162.

In addition to its high yield potential Rio Blanco has been identified as having excellent test weight patterns, and excellent protection to soil borne mosaic virus. Rio Blanco is susceptible to powdery mildew.

Juvenile growth habit is semi-erect. Plant color at boot is green with an erect, twisted flag leaf. Auricle hairs and auricle anthocyanin are present. Head shape is tapering, middense, awned and head color is white at maturity. Glumes are glabrous, midlong to long and narrow with oblique shoulders and acuminate beaks. Seed shape is ovate to elliptical with rounded cheeks. Seed crease is narrow and shallow.

Rio Blanco's area of adaption based upon yield performance would include the major wheat growing areas of Colorado, Kansas, Oklahoma, northern Texas and southern Nebraska.

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EXHIBIT E.

STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

Agripro Biosciences Inc. is the applicant for protection in this case being:

- a) The incorporated business (registered in Delaware) for and within which regular employees have bred the named variety.
- b) The proprietary owner and intending commercial user of the variety.

EXHIBIT F.

QUALITY AND AGRONOMIC DATA

Quality Data	page 1.
Height and Maturity Data	page 2.
Agronomic & Pathological Data	page 3.
Hard Wheat Trial Summary Data	page 4.

AGRIPRO WHEAT
HARD RED WINTER WHEAT

YEAR: 1988

YEAR	VARIETY	LOC	FLOUR/WHEAT QUALITY							BAKING QUALITY				
			WHT	FLR	CN	FLR	ASH	MIX	ABS	MIX	LCAF	---CRUMB---		
			PROT	PROT	HRD	YLD		TOL		TIME	VOL	GR	TX	COL
			14%mb	14%mb		%		R		min	cc	R	R	R
88	RIO BLANCO	SK	14.9	14.2	66	63.3	.471	6	63.0	3.50	1300	5	3	3
88	RIO BLANCO	NO	13.6	12.9	56	64.0	.428	3	63.0	4.00	1210	4	2	2
87	RIO BLANCO	WK	12.8	11.7	59	65.6	.433	5	64.0	5.00	1180	4	3	3
87	RIO BLANCO	GI	14.5	13.2	58	66.2	.000	5	66.0	3.25	1225	6	3	3
86	RIO BLANCO	NO	13.7	12.2	--	65.4	.000	4	64.0	4.75	1000	3	2	2
85	RIO BLANCO	SK	12.1	11.5	--	69.0	.000	5	60.0	4.50	980	3	2	2
85	RIO BLANCO	GK	11.9	10.3	--	68.0	.000	4	62.0	3.50	900	2	1	2
84	RIO BLANCO	SO	12.6	11.5	--	71.9	.378	4	63.0	4.25	990	2	3	2
84	RIO BLANCO	GI	14.8	12.0	--	71.6	.471	3	65.0	3.75	975	2	1	2
83	RIO BLANCO	SK	13.3	11.6	--	70.2	.000	4	61.0	4.25	875	2	2	1
82	RIO BLANCO	LK	14.2	13.6	--	72.2	.000	2	66.0	3.50	940	1	1	1
AVERAGE			13.5	12.2	60	68.0	.440	4.1	63.4	4.02	1052	3.1	2.1	2.1
88	NEWTON	SK	14.1	13.3	65	60.4	.448	2	62.0	2.50	1080	4	4	3
88	NEWTON	NO	12.5	11.2	64	61.8	.417	1	60.0	3.75	1050	3	3	2
87	NEWTON	WK	12.2	11.4	57	63.3	.327	5	62.0	2.75	1010	2	3	3
87	NEWTON	GI	11.8	11.0	61	64.6	.000	5	63.0	3.00	1100	4	2	3
86	NEWTON	NO	12.0	10.9	--	63.7	.000	3	63.0	4.00	980	3	3	2
85	NEWTON	SK	12.6	11.7	--	67.9	.000	4	61.0	3.00	860	3	3	3
85	NEWTON	GK	11.9	10.2	--	67.3	.000	5	62.0	3.50	890	2	2	2
84	NEWTON	SO	12.0	10.8	--	69.6	.399	6	59.0	4.75	920	2	2	3
84	NEWTON	GI	14.0	11.5	--	70.3	.439	4	63.0	3.50	925	2	1	1
83	NEWTON	SK	11.9	10.0	--	69.0	.424	4	60.0	4.25	875	2	2	1
82	NEWTON	LK	12.4	11.6	--	69.7	.000	4	62.0	4.50	850	2	2	2
AVERAGE			12.5	11.2	62	66.1	.410	3.9	61.6	3.59	958	2.6	2.5	2.3

R=RATINGS 1-2=EXCELLENT 3-4=GOOD 5=ACCEPTABLE 6-7=QUESTIONABLE 8-9=UNACCEPTABLE

page 2.

RIO BLANCO MATURITY SUPPORT DATA

	<u>88 Locations*</u>			<u>87 Locations*</u>		<u>X</u>
Rio Blanco	3	3	4	3	4	3.4
Mesa	2	3	3	2	3	2.6
Trailblazer	5	5	5	5	5	5.0
Tam W 105	5	4	5	4	4	4.4

*rating scale: 1=very early 9=very late

RIO BLANCO HEIGHT SUPPORT DATA

	<u>88 Locations</u>			<u>87 Locations</u>		<u>X</u>
	(cm)			(cm)		
Rio Blanco	87	80	80	69	86	80.4
Mesa	82	85	75	70	85	79.4
Trailblazer	92	90	90	85	97	90.8
Tam W 105	94	105	88	82	89	91.6

*Note: Tam W 105 is an intermediate height semidwarf.

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RELATIVE RANKINGS OF RIO BLANCO AND FOUR OTHER HRWW VARIETIES FOR
VARIOUS AGRONOMIC AND PATHOLOGICAL TRAITS - 1988 SUMMARY

VARIETY	TEST WEIGHT	PHYSIOLOGICAL MATURITY	HEIGHT	SOIL BORNE MOSAIC VIRUS	SPINDLE STREAK MOSAIC VIRUS	POWDERY MILDEW
Rio Blanco	4	3	3	3	4	8
Abilene	3	4	3	2	4	8
Trailblazer	5	5	4	3	4	8
Mesa	2	2	2	2	3	8
Siouxland	4	5	6	8	7	2

The rankings in the table above are based on a scale of 1-9, where 1 and 9 represent the following extremes for the respective traits.

Test Weight	1	9
Maturity	high	low
All disease & insect ratings	early	late
	resistant	susceptible

AGRIPRO SEEDS
HARD WINTER WHEAT TRIAL SUMMARY
OVER LOCATIONS-OVER YEARS - 1988

YEARS: 85,86,87,88
VARIETIES: RIO BLANCO vs. ARKAN

<u>LOCS</u>		<u>YIELD Bu/Ac</u>		<u>LOCS</u>		<u>T.WT. lb/Bu</u>	
<u>STATES:</u>		<u>RIO B.</u>	<u>ARKAN</u>			<u>RIO B.</u>	<u>ARKAN</u>
CO	4	105.3	107.3	4		60.3	59.8
KS	33	52.2	48.0	33		59.0	57.5
MO	1	55.9	60.8	0		0.0	0.0
NE	3	71.8	69.0	3		56.8	56.4
OK	2	51.4	50.9	2		57.9	58.3
TX	1	78.8	72.4	1		57.8	55.3
ALL	44	59.0	55.8	43		58.9	57.6

YEARS: 85,86,87,88
VARIETIES: RIO BLANCO vs. SIOUXLAND

<u>LOCS</u>		<u>YIELD Bu/Ac</u>		<u>LOCS</u>		<u>T.WT. lb/Bu</u>	
<u>STATES:</u>		<u>RIO B.</u>	<u>SIOUX</u>			<u>RIO B.</u>	<u>SIOUX</u>
CO	3	93.5	99.7	3		60.0	59.6
KS	23	49.5	46.8	23		59.1	57.4
MO	1	55.9	62.3	0		0.0	0.0
NE	3	71.8	74.3	3		56.8	57.9
OK	2	51.4	53.5	2		57.9	58.9
TX	2	77.7	67.2	2		55.7	53.5
ALL	34	57.3	55.9	33		58.7	57.5

THIS DATA REPRESENTS ALL DATA AVAILABLE IN HRWW REGION FROM PUBLIC AND PRIVATE TRIALS, DATING BACK TO 1985. THESE TRIALS INCLUDE IRRIGATION, CONTINUOUS, AND SUMMER FALLOW.

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